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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/046,991	01/15/2002	Alphons Antonius Maria Lambertus Bruekers	NL 010009	6337

24737 7590 04/19/2005

PHILIPS INTELLECTUAL PROPERTY & STANDARDS
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EXAMINER

CHASE, SHELLY A

ART UNIT	PAPER NUMBER
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2133

DATE MAILED: 04/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/046,991	Applicant(s) BRUEKERS ET AL.	
	Examiner Shelly A Chase	Art Unit 2133	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 January 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☒ Claim(s) 19 and 20 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

1. Claims 1 to 18 are presented for examination. The amendment filed 1-13-2005 add new claims 19 to 20.

Response to Amendment

2. Applicant's arguments with respect to claims 1 to 18 have been considered but are moot in view of the new ground(s) of rejection.

Specification

The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

Arrangement of the Specification

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) TITLE OF THE INVENTION.
- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
- (d) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC (See 37 CFR 1.52(e)(5) and MPEP 608.05. Computer program listings (37 CFR 1.96(c)), "Sequence Listings" (37 CFR 1.821(c)), and tables having more than 50 pages of text are permitted to be submitted on compact discs.) or
REFERENCE TO A "MICROFICHE APPENDIX" (See MPEP § 608.05(a). "Microfiche Appendices" were accepted by the Office until March 1, 2001.)
- (e) BACKGROUND OF THE INVENTION.
 - (1) Field of the Invention.
 - (2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
- (f) BRIEF SUMMARY OF THE INVENTION.

Art Unit: 2133

- (g) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
- (h) DETAILED DESCRIPTION OF THE INVENTION.
- (i) CLAIM OR CLAIMS (commencing on a separate sheet).
- (j) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
- (k) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

4. Claims 1 to 3, 9 to 11, and 17 to 18 are rejected under 35 U.S.C. 102(b) as being anticipated by Venters et al. (USP 5875202).

Claim 1:

Venters teaches a digital communication system with a parallel path, comprising: a source (100) at an end site outputting a digital data ("receiving the input digital signal comprising at least one packet of digital data") to an encoder (120) for encoding ("encoding the packet of the input signal into encoded packet of digital data") and to an error detection generator for generating error detection data ("calculating a checksum of the at least one packet of the input digital signal"), (see fig. 4 and col. 5, lines 31 et seq.). Venters also teaches that a merge unit (125) receives the encoded packet and the computed error detection bits adding the error detection bits at the end of the encoded data (see col. 5, lines 45 to 54).

As per claim 2, Venters teaches that the error detection code is added as a separate code (see fig. 4 and col. 5, lines 36 et seq.).

As per claim 3, Venters teaches that the error detection generator computes a CRC checksum (see col. 5, lines 40 to 41).

As per claim 17, Venters teaches a high-level data link control (HDLC) transmitter transmitting a header and composite blocks (see col. 4, lines 3 to 10 and col. 5, lines 50 to 55).

As per claim 18, Venters teaches an output buffer (222) ("storage means") receiving the decoded signal (see col. 6, lines 2 to 6).

Claim 9:

Venters teaches a digital communication system with parallel paths, wherein encoded data are transmitted over a channel (160), the system comprising: an error detection code generator (150) computing an error detection code for a received digital data (see fig. 4 and col. 5, lines 32 to 40), ("a first calculation means for calculating a checksum of the at least one packet of the input digital signal"). Venters also teaches that the system includes an encoder (120) receiving digital data and encoding the digital data (see col. 5, lines 30 et seq.), ("encoding means for lossless encoding of the at least one packet into an encoded packet of digital data").

Venters further teaches that the digital system includes a merge unit (125) connected to the encoder and the error detection code generator, adding the received computed error detection code to the received encoded data (see fig. 4 and col. 5, lines 45 to 50), ("composition means connected to the calculation means and encoding means for adding the associated checksum to the encoded packet to form an encoded signal").

As per claim 10, Venters teaches that the error detection code is a separate code added to an encoded signal (see fig. 4 and col. 5, lines 45 to 54).

As per claim 11, Venters teaches that the error detection code generator computes CRC checksum (see col. 5, lines 40 to 41).

5. Claims 5 to 8 are rejected under 35 U.S.C. 102(e) as being anticipated by Yung (USP 6578162 B1).

Claims 5:

Yung teaches an error recovery method for speech data wherein in an transmit path a received speech signal is encoded by an encoder (34) and a channel encoder/formatter (31) appends error detection codes to the encoded signal before transmitting the encoded signal to a receiver that decodes the received signal, the method comprising: a receiver (26) receiving the encoded signal (see fig. 4 and col. 12, lines 5 to 8) and a demodulator (28) processing the received signal (see col. 12, lines 6 to 10), ("extracting the encoded packet and associated checksum from the received encoded signal"). **Yung** also teaches a channel decoder (30) decoding the data received from the demodulator and computing a CRC code (see col. 12, lines 7 et seq.), ("decoding the encoded packet into a decoded packet comprising the input digital signal").

Yung teaches that the decoder compares the calculated CRC code with the received CRC code for error detection and correction (see col. 12, lines 8 to 12). **Yung** further teaches the method including a bad frame detector (112) that analyze the error detection data and respond according based on the results, i.e., if an error is detected (see col. 14, lines 20 et seq.), ("if the calculated checksum corresponds with the extracted checksum, outputting the decoded packet as an output signal").

As per claims 6 and 7, **Yung** teaches the method step of detecting a bad frame includes a silent substitution block (108) that replaces a voice portion of the frame and mute the signal (see col. 14, lines 45 to 51).

As per claim 8, Yung teaches the method includes a channel encoder and a channel decoder for channel encoding the signal and channel decoding the signal (see col. 11, lines 60 to 65 and col. 12, lines 5 to 10).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 4 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Venters et al. in view of Yung.

As per claims 4 and 12, Venters teaches an encoder for encoding a received signal; however, fails to specifically teach the encoder is a channel encoder for channel encoding the received signal; Yung in an analogous art teaches a digital communication system employing a channel encoder for channel encoding the received digital signal (see fig. 4 and col. 11, lines 60 et seq.).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the digital system of Venters to include a channel encoder and a channel decoder as taught by Yung. This modification would have been obvious because a person of ordinary skill in the art would have been motivated to employ a system for efficiently detecting and correcting errors in speech

data using a channel encoder and a channel decoder for its advantages of reducing the complexity of error detection and correction in digital communications.

8. Claims 13 to 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yung in view of Venters et al.

Claim 13:

Yung substantially teaches the invention as claimed. Yung teaches an error recovery method for speech data wherein in an transmit path a received speech signal is encoded by an encoder (34) and a channel encoder/formatter (31) appends error detection codes to the encoded signal before transmitting the encoded signal to a receiver that decodes the received signal, the method comprising: a demodulator ("extracting means") receiving the transmitted encoded signal (see col. 12, lines 5 to 8) and a channel decoder ("decoding means") connected to the demodulator, decoding the received signal (see col. 12, lines 8 to 12). Yung also teaches a PCM decoder converting the received signal and outputting the converted signal (see fig. 4, and col. 12, lines 15 to 25).

Yung does not specifically teach a second calculating means connected to the decoding means calculating a checksum for the decoded packet; however, Venters in an analogous art teaches a digital communication system wherein a CRC calculation unit (211) is connected to a decoder for computing CRC values of the decoded data (see fig. 4 and col. 6, lines 17 to 25). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the digital

Art Unit: 2133

communication system of Yung to include a second CRC computing device connected to a decoder as taught by Venters since, Venters teaches a digital communication system with a parallel path enables synchronization and a low error rate (see col. 1, lines 15 et seq.). This modification would have been obvious because a person of ordinary skill in the art would have been motivated to employ a device for achieving low error rate and proper synchronization as taught by Venters.

As per claims **14** and **15**, Yung teaches the method step of detecting a bad frame includes a silent substitution block (108) that replaces a voice portion of the frame and mute the signal (see col. 14, lines 45 to 51).

As per claim **16**, Yung teaches that the digital communication system includes a channel coder (31) and a channel decoder (30) channel encoding and channel decoding the speech signal (see col. 11, lines 60 et seq.).

Allowable Subject Matter

9. Claims 19 and 20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

10. The following is a statement of reasons for the indication of allowable subject matter: the prior art made of record teaches encoding and decoding digital data as detailed above; however, the prior art made of record fails to teach or fairly suggest or render obvious the novel elements as recited in the claim. Specifically, the prior art fails

Art Unit: 2133

to teach or fairly suggest a digital signal conforming to the Direct Stream Digital (DSD) standards and the encoding step includes Direct stream Transfer coding.

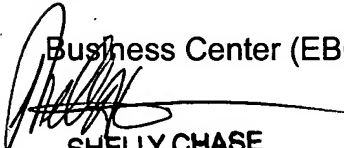
Conclusion

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shelly A Chase whose telephone number is 571-272-3816. The examiner can normally be reached on Mon-Thur from 8:00 am to 6:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Albert Decady can be reached on 703-305-9595. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).



**SHELLY CHASE
PRIMARY EXAMINER**

Shelly A Chase